

GEORGE W. YORK, Editor.

MASSACHUSETTS
HORTICULTURAL
COLLEGE

AMERICAN BEE JOURNAL.

ESTABLISHED IN 1861 OLDEST BEE-PAPER IN AMERICA
DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

39th YEAR.

CHICAGO, ILL., SEPTEMBER 28, 1899.

No. 39.

CONTRIBUTED ARTICLES

The Home Bee-Yard—Quadruple Hives.

BY E. FRANCE.

THIS picture shows a part of our home yard of Langstroth hives, made to hold four colonies each. We work them for extracted honey, 8 frames in a set, 3 tiers high, making 24 Langstroth frames to each colony. We could use them higher if we wanted to, but we think 3 is about right.

How do we manage those hives? I will commence in the spring of the year. When fruit-trees and dandelions are in blossom we set our hive-tent over one of the hives, put all the brood into the bottom story, honey into the second story, empty combs up into the third story, and clip the queen. If there is more brood than enough to fill the bottom story, we give it to any colony that lacks enough brood to fill the lower part (8 frames). We aim to have every colony have 8 brood-combs at this time of the year, and we usually find enough brood in the yard to give all eight brood-combs, and have some to make a few new colonies, after going over the yard in this way.

We don't do anything more until we find they are getting more than a living. If there is clover, about June 15 we go over the bees again, see that all have 8 brood-combs, and make new colonies with the surplus brood-combs.

Now, if we have a good flow of honey from clover, we will soon commence to extract, keeping the brood in the lower story, and extracting from the two upper ones. We watch the honey-sources closely, and aim to have the upper set of combs full at the close of the basswood honey-flow.

I used to take off the third stories in September or first of October, and see that the second story was full of honey, but the last two years I have left the third stories on full of honey, and find the bees have wintered splendidly in that way. They came thru the winter strong, and no spring feeding needed to be done.

If you want to winter bees out-of-doors, give them a large hive, and a good deal too much honey is just enough. If the bees don't use up all the honey you will get it when you begin to extract.

We use barrels to store our honey in. They are much the best, easier to handle, and safer. Grant Co., Wis.



The Honey-Bees Do Not Injure Grapes.

BY C. P. DADANT.

ANOTHER heavy grape crop is now on the vines in this vicinity, and yet we do not hear the usual complaint about bees eating grapes. It looks as if the uneducated grape-growers had at last come to the conclusion that the bee-keepers are right when they assert that bees cannot puncture sound grapes. But such is surely not the case, and the silence of the grape-growers comes from the fact that no damage is being done this year, for the very simple reason that, in this vicinity at least, the weather has been so dry that the grapes are not bursting, and altho the honey crop is short in the uplands, the bees have no occasion to annoy the horticulturist, for there are no damaged grapes for them to work on. The birds themselves, having a great abundance of wild cherries, of which they are very fond, do not carry on their usual depredations in the vineyard. It is only when the grapes are being pickt and



Quadruple Hives in Mr. France's Home Bee-Yard.

prepared for market that a few of the berries are bursted in handling, and a very few bees may be seen about them.

The prejudice among grape-growers in regard to the bees is very deeply rooted, and will take years to eradicate. Too many people judge of things by superficial observations, and decide a question by appearances and not by facts. When grapes are damaged, either by bursting, from rains, which send an extra amount of sap in the vine, or by the inroads of birds—thrush, cat-bird, quail, robin, etc., the bees take the blame, because they boldly take possession of the damaged fruit in broad daylight; and yet their role is only to save that which would otherwise be lost. But it is most difficult to convince the vineyardist that they are not the original causes of the trouble.

I remember being taken to task by an old Frenchman—a very good friend of mine, I must say—for keeping so many bees which were entirely destroying his crop of grapes, and his hopes of filling his cellar with the nectar dear to all Frenchmen. He said that if bee-keepers could not be made to see the folly of their ways, a law should be past forbidding any one from keeping any more than 20 colonies of bees on one farm. "I have studied the matter," said he, "and I know exactly how they do. They always make two holes in a berry, one exactly above the other."

Upon this I protested, and held that it was the quail that made the two holes with both points of its beak. I even tried to show him, and it was plain to any one who was not entirely prejudiced, that the punctured berries were all on the same side of the bunch, because the holes had all been made, probably in the space of a few seconds, by a bird that had enough and amused itself, like bad boys in a melon patch, by plugging what it could not eat. But the bird had gone, and the bees were there, and it was of no use to try to defend them, when they were so willing to be seen. So my arguments, which I considered as conclusive and convincing, only served to make the man angry, and he would not speak to me for a year or more.

But what is the actual physiological position of the bees in regard to fruit? The honey-bee has mandibles or



Mandible of Hornet.



Mandible of Honey-Bee.

jaws, in the form of spoons, working vertically instead of horizontally, as in animals. These mandibles are horny and entirely devoid of teeth. They can be used only for the usual purposes of the hive, to mold the wax, build the combs, and handle and carry out any debris. They can use them to tear the corolla of blossoms or even leaves, and they also can tear cloth, by taking hold of imperceptible protruding threads and pulling them out, one after another, till a hole is made. But the hole that they make in a piece of cloth is ragged and uneven, it is torn, not cut. They have no sharp, saw-like jaws like those of hornets, and it would be as impossible for them to bite into the smooth skin of a fruit as it would be for a man to take a bite out of a smooth wall.

We have had as good chances as any one, perhaps, to make remarks and take observations on this subject, for we have had both bees and grapes, on a large scale, for 33 years in this country. We now have a vineyard of 13 acres, with an expected crop for 1897 of 30 tons of grapes. We have an apiary of about 90 colonies of bees on the same farm, and altho we have to be careful, when we crush our grapes to make wine, not to leave the juice exposed, we can say that we have never been to any real inconvenience by reason of the bee's love for grape-juice.

So give honor to whom honor is due. The bee is not the enemy of the horticulturist, but his friend, and I am glad to say that the better informed horticulturists have long ago found this out. The others will come to it, but it may take years to convince them of their mistake. It is a subject which must be brought before the public at regular intervals until the truth is taught in our public schools. It is as necessary to teach this as it is to assert that the earth turns around the sun, for those are facts which are absolutely positive, and yet cannot be proven by careless and casual observation.

Hancock Co., Ill.

[The foregoing article was sent to us early in September, 1897, and for some unaccountable reason was not pub-

lished. We are very glad to place it before our readers at this time, especially as the question of bees and grapes has been referred to of late in these columns. Mr. Dadant is entirely competent to speak on the subject, being a high authority on both bees and grapes.—EDITOR.]



Carniolan Bees, Dadant's Langstroth, Etc.

BY PROF. A. J. COOK.

THERE is no doubt that the Italian bee is a very great favorite with nearly all our American bee-keepers. Its peaceful habit, energy in gathering, courage to defend its hive, and ability to get honey from flowers not within reach of the common bee, have given it a wide and just reputation. I have never had experience with more than one other variety that was at all comparable with the Italian, that is with the Syrian.

The Syrian bee was thought by many to be too cross, but, after a little experience, I found it as easy to manage the Syrian as the Italian. While I think the Syrian is as good a bee as the Italian, I was never sure that it had any considerable superiority.

From my reading, I have long had a desire to know more of the Carniolan bee. Its reputation for amiability, activity and vigor, and especially its ability to withstand cold weather, seemed to give it superior excellence; indeed, so far as I know, there is only one disadvantage to this bee, and that is the tendency to over-swarming. As over-swarming results either from over-crowding of the hive or some discomfort within the hive, it may, in the hands of the wise bee-keeper, be no serious objection. If the Carniolan is so prolific that it speedily fills the hive with bees, and thus leads to swarming, surely that would be a recommendation. If lack of shade and over-heating leads the bees to leave the hive, then that objection could easily be remedied.

It was my pleasure, during the latter part of last July, to be in the East, and an exceeding pleasure to visit the apiary of Mr. Frank Benton. I there saw a large number of Carniolans from imported queens. As always before, when I have seen the pure Carniolans, I was very much pleased with their appearance. Their very large bodies and light-colored rings, formed by the gray hairs, make them indeed very attractive.

As I had never had any chance to study them I was of course interested to investigate their most pronounced superiority—amiability. We went to the hives late in the evening—Mr. Benton said it might as well be in the night—opened the hives with no smoke, and examined them without any bee-veils. As is well known, bees are often angered by quick motions or jars. Mr. Benton lifted a frame half way from the hive and let it drop, and yet there was no show of anger. He also struck at the bees with his hand, and blew on them roughly, and yet there was no show of resentment. From the size, beauty and amiability of these bees I am ready to regard them with much favor.

Mr. Benton—than whom there is no better authority—tells me that they rank with the Italians as honey-producers. He says that the comb is as white as that of the black bees, as these bees, like the black bees, leave a little space between the honey and the capping. Mr. Benton acknowledges that they do have the swarming instinct a little more pronounced than the other races, yet he thinks that this is induced, often, at least, by over-heating in the hive, and will give no trouble if the hives are properly shaded.

Mr. Benton also told me, a fact of which I was well assured before, that the pure Carniolan would never have a show of the yellow bands seen in the yellow races or the hybrids. In case the yellow does appear there is certainly some taint of blood, usually Italian.

From all my reading, and from what I learned from Mr. Benton, I believe that the Carniolan bees are well worthy of trial, especially by those who are timid when working with bees. I feel myself that I would like to go into the queen-rearing business, did my duties permit, and confine my attention to this race of bees.

DADANT'S "LANGSTROTH ON THE HONEY-BEE."

While visiting the American Bee Journal office, in August, the editor put into my hands the fourth edition of this excellent work. It divided my attention as I sped across the country on my homeward journey with the wondrous scenery of the Rocky Mountains. It is certainly a most admirable book. It called to my mind so vividly my

first reading of Langstroth's marvelous book, and the intense pleasure that I received from reading it.

Many years ago that grand man, Mr. Langstroth, spent a week with me at my home. He told me he wished to have his book revised, and asked my advice as to the best person to undertake the task. After thinking the matter over, I suggested Chas. Dadant & Son. I am very sure that this book proves that I was not unwarranted in so doing. Mr. Dadant's wide and able experience enables him to bring the book up to date, and of course that was all that was needed, or all that any wise person would have undertaken.

There are a few points that I should call in question, which I propose at some future time to notice, but they are none of them material, and I most heartily commend the book to all readers of the American Bee Journal, and to all other bee-keepers.

CLEOME BEE-PLANTS AND MESQUITE.

While coming across the continent on the Santa Fe road, I was much interested in the bee-plants, and especially the ones named above. *Cleome integrifolia* appeared abundantly from Denver all thru Colorado, and later *cleome pungens* was quite as abundant. The bees were working on these plants in good numbers in many places. I picked blossoms and shook them over paper, when there was quite a shower of nectar drops. It will be remembered that I experimented with this plant in Michigan as one of the most hopeful for bee-pasturage. The result was not at all satisfactory. The difficulty seems to be that when there is not natural bee-forage the season will be such that introduced plants will fail to yield honey. Whatever the reason may be, the experiment was an entire failure. The anthers at the end of the stamens in the *cleome pungens* were green, and the entire flower was very attractive, fully more so, if anything, than *cleome integrifolia*.

I also saw abundant mesquite all thru Arizona. These plants were not near enough to the railroad for me to see whether the bees were working on them or not. I believe that it was past the time of their bloom, tho a few straggling flowers might very likely linger even to August.

Los Angeles Co., Calif.

The Bee's Eyesight or Length of Vision.

BY P. A. SIOLL.

I WOULD like to reply to (not answer) Mr. Geo. H. Stipp's question, or desire (see page 781—1898) to know something about the eyesight of the honey-bee. All that we know about the eyesight or length of vision is about the eye of the human being, our own genus; that is, where we can claim to have some knowledge indubitably, because here our knowledge is not only based on experimental figuring and investigation by micrometric instruments, etc., but we are able to acquire some positiveness—we have the individual himself to explain and answer questions. Wherever we cannot do this the result is, in my opinion, quite problematic and mere guess-work.

Now, take the eyesight of the human being as a rule; what great difference do we find in the eyes of different individuals—hardly two alike; and how far apart is the length of vision from the most far to the most near sighted one? And is there any possibility of doubt that it is just the same all thru the animal world, bees included? So far as my observation reaches I am sure it is so with horses and dogs.

Well, have some entomologist experiment micrometrically with the bee's eyes, trying to find the length of vision of the species; and after making his observations with quite a number of bees, say 100 to 500, he comes to the conclusion that he found what he was searching for, as the majority of his cases were running the same way; but accident happened to furnish him for his experiments nothing but far-sighted bees, or at least the larger amount of them, and what will be the result of his investigation?

Soon another of the same fraternity will come out with an entirely different result, because he had more near-sighted bees to experiment with. Then follows a lengthy dispute between the two scholars and their adherents, but from a general view scientifically there is not much value in all those investigations, as they do not arrive at positive knowledge without all imagination. "Science sometimes makes great mistakes," says Dr. Mason. That's true.

In my younger years, having the sight of one eye only, I could see with distinctness as far as any person was able to do; I could follow the flying bee for at least 100 feet away, and near by the same; the eyesight regulating itself

to suit the distance quite minutely. Now, however, everything is a blur, and the eye is slow on changing distances; 10 to 15 feet is about as far as I am able distinctly to follow a bee flying away.

So, when Mr. Stipp says it is reported that tests of the sight of the condor of the Andes showed he can see at a distance of 100 miles, I would like to know how to prove that; there are no glasses to carry the eyesight of man as far as 100 miles, and with a standpoint on ordinary ground, and with the best instruments, one cannot see further than 30 to 40 miles. That shows that the above assertion is nothing but exaggeration and imagination, and remains with the individual faith whether he may believe or not. But one ought to be slow to take everything for a fact that he sees in print.

To return to the bees: A bee after loading up and taking her homeward flight, certainly is quick as lightning—she beats the carrier-pigeon, but she knows her way, in all probability has traveled it a good many times before; besides she is eager to bring her load home.

Now observe her when she is hunting for nectar in the pasture field. She is in no hurry, making no jumps at all, but easily meandering from one flower to the next, and when there are no more to visit in that immediate neighborhood, she does not move away in a direct bee-line to find more flowers of the same kind, but she scans the ground forward and backward until her sense has discovered the smell of sweets on a new hunting ground. That it is the scent more than anything else which leads the bee on her searches for honey has been shown clearly by Prof. F. Plateau, of Geneva, who experimented with a great number of different honey-yielding flowers, particularly with those of a highly-colored and showy kind, by cutting away their corona leaves or tubes, without injuring those parts which secrete the nectar; and bees, bumble-bees and butter-flies were visiting these flowers and getting the honey out of them after this act of mutilation just as well as before, hardly making any difference with one or two varieties of them, where they circled around just as if they did not know how to attack their crown, tho it was evident that they had the scent of the honey therein. Even flowers that had been hidden entirely by covering them over with leaves or brush enjoyed the visit of those insects just as well. (Bulletins of the Royal Academy of Belge.)

But suppose even that it was possible to ascertain the length of vision of the average bee's eye, it would still leave the question an open one, whether the bee on her swiftest flight could discern the objects she is passing by, and overhead. Who will answer for the little bee? And what good can it be to us if we know? Sonoma Co., Calif.



A Bee, Chicken and Skunk Story.

BY WM. M. WHITNEY.

SOME time ago I promised Editor York to give a bee, chicken and skunk story, and as work in the bee-yard is not crowding, I can give it now; so, here goes.

Allow me to premise by saying, that while the following statement was suggested by the St. Louis chicken story, it is not in the least intended to discredit any of the alleged facts therein, but to give simply my own experience. I will say, however, that we should be very careful in making our observations—lest our deductions be erroneous.

On the farm in Ohio we raised the Barred Plymouth Rock fowls; and the pure-blooded males, when about half grown, are quite light-colored; in fact, some of them at a little distance, would be called white. They had a habit of frequenting the bee-yard, but after awhile the bees concluded their room was better than their company, and drove them out of the yard, "for keeps."

Mephitis Americana also made frequent visits to the yard. I discovered him by accident, and sought a hiding-place to watch his operations. He always came—or, that was when I saw him—immediately after a thunder-shower. His movements indicated no fear of the bees, for he was all about the hives, moving in a gentle and quiet manner; neither disturbing the bees, nor being disturbed by them. Hence, the conclusion: Bees dislike light colors, but are partial to black. But, hold on a bit. *My bees prefer the society of a skunk to that of the bloodedest cock that struts the yard! Perish the thought!* Let us investigate a little further.

The ground in the bee-yard, while being sward, is very loose and fertile. The chicks found that there were many grubs and angle-worms there, and commenced scratching

for them. Well, do you suppose the bees were willing to have the dirt thrown into their eyes in that way? Not a bit of it; but Mr. Skunk moved about in such a quiet and unassuming manner that he was not in the least molested.

He was there for the same purpose that the chicks were, but he went about his work in an entirely different manner.

It matters not how white the cock is, nor how long his pedigree, he cannot go tearing around among the bees without being told—not in the most polite manner—to please *get out*; while even a skunk, black as the blackest, is permitted to roam about to his heart's content.

Draw your own conclusions. Kankakee Co., Ill.



The "Old Reliable" seen thru New and Unreliable Glasses.
By E. E. HASTY, Richards, Ohio.

ENFORCING ANTI-ADULTERATION LAWS.

No, it's no great occasion for lamentation (or objurgation) that the first grocer arrested got off without a sentence. The Lord himself once let off a culprit undisputably guilty of breaking a plain law—and for reasons which some of them apply in this case. *Nobody had ever heard of any attempt to enforce the law*, tho broken daily by a multitude of offenders, some of them high up in the world. Chicago offenders have now heard of an attempt to enforce. On a new case, committed since the attempt at enforcement, the same justice would not go hunting for an excuse to acquit. When a justice goes on that sort of a hunt there'll quite surely be a squirrel in his bag when he gets home.

SELLING HONEY BY LEAVING SAMPLE.

Glad to hear that Comrade Tyrrell's plan of selling honey by leaving for inspection a sample jar and circulars works in his locality. It may be capable of large imitation. I tested some years ago a plan of leaving circulars only—circulars promising to call with honey on a certain day. No good. Our city people have got beyond reading circulars left with them. But a short circular left with a jar of honey would probably be read in most cases. Page 514.

KEEP HONEY IN A DRY, WARM PLACE.

Does not Mr. Hutchinson make a serious slip in his excellent Country Gentleman article (page 514), when he directs to put a barrel of honey in a cool place? That would be taken to mean the cellar by most readers.

WON'T BE FICKLE ANY MORE ON HIVES.

"Ten-frame hives, which will be my last change." Page 515.

From Daisy to sweet little Minnie
I changed, then to dear Lenore;
From her to several others
(Not numbering quite a score),
And now to large-hearted Polly—
BUT I'M NOT GOING TO CHANGE ANY MORE.

How cunningly Miss Minnie Draper-Barnes will smile when she hears this good resolution!

WORKING WITH BEES MORNING AND EVENING.

It seems to me that Mr. Hilton is off the track in intimating that bees never need attention in early morning and at eventide. Far the most precious portions of the day to the bee-keeper, I should say. But the bee-keeping minister don't need to write at eventide—I don't believe. For writing, use all the early morn that ever you choose; but don't burn your intellectual candle at both ends, unless you are sure that it is a very, very long one. Page 515.

EXTRACTING FROM WAX-WASTE.

What W. R. N. thinks well of on page 519—having cloth without perforated metal hold his wax waste in the extractor, and then throwing it away when clogged—has been my practice for a long time now. Still I'm not happy. There seems to be need of side-drainage in addition to bottom-drainage. Perhaps a tilt once in a while, as the bee-keeper goes by, will be needed in addition to the side-channel.

VALUE OF "HORSE-LIGHTNING."

You're too kind to me on page 522, Mr. York. Mr. Brown may try his "horse-lightning" current on me at 6 a.m.—likewise at 8:15 p.m. Increases value 175 percent. D'ye hear?

GETTING RID OF ANTS.

The difficulty of destroying ants (Question-Box, page 523) is plainly related to the difficulty of cooking a hare. Locating him may be the worst part of it—and getting hold of him nearly as bad. Moreover, respondents living in the South and far West are decidedly fainter than the others in their shouts of victory—if not inclined to wring their hands in something that looks like agony. Most of us are bothered by ants a little at times, but not quite enough to make us keep our powder dry.

OUT-DOOR FEEDING OF BEES.

On page 525, Mrs. Axtell's out-door feeding seems to be one of the most instructive things in the number. To feed 140 colonies effectively in a box of three-pail capacity is quite a triumph. We think out-door feeding as easy as rolling off a log until we try it—try it a few times, with failure, and then quit. My last failure was owing to the excitement of the bees. More than half of them wouldn't hold still a second—into the honey, and out of it again, in endless succession, till too well plastered and too cold to fly, then on the ground footing it in the sand till they couldn't walk any more. Reckon her success was partly in that frame of lath nailed together, partly hot weather, and most of all in having the bees used to the business.

POINTS ON BEE-HUNTING.

John Piddington's bee-hunting ideas seem good—page 541. Don't be in such a hurry to move off on your line. Catch more bees at the first station. Humor the shy ones by exposing a section outside any box. *Prospect* your lines a good way before making any move of the bait.

YELLOW AND GREEN FLOWERS AS HONEY-YIELDERS.

That "Britisher," page 538, who in effect brands yellow and green flowers poor honey-yielders, would have to readjust his rules for this country. Spanish-needle and golden-rod and Helianthus yield quite a percentage of all American honey. Mustard and rape and white root and dandelion are bee-favorites. The most profuse yielding I ever saw was from yellow flowers (tulip tree). Basswood, our greatest yielder, is a compound of yellow and green—two of the branded colors. Corn and the grasses and grains, which bees visit very much for pollen, nearly all have yellow or yellow-green inflorescence. As for scarlet flowers being never visited by bees, I don't even believe he sees straight for England. Believe I can go to England and see bees just as wildly enthusiastic over scarlet poppies as they are here, and catch just as many bees in the red hollyhocks as he can in the white ones. Hear an impudent Yankee shouting, Mr. Hamlyn-Harris.

THAT UNCAPPING-FORK.

An uncapping-fork, eh? Well, some of us are eminent at working with a knife and fork, and perhaps we need it to complete our outfit. And possibly, indeed, it may be a very valuable addition to work uneven combs. Don't believe it will whisk off smooth combs like a good knife. And most of us will want to "see it go" before taking much stock in it. Page 538.

HERE'S A ~~LETTER~~ TO EX-EDITOR HOLTERMANN.

And so we are to lose, and Christian evangelism is to gain, one of our editors—Mr. Holtermann. Should have extended my hand and "God bless him" sooner, only I did not see the item till just now. Page 537.

ARRANGING HIVES IN THE CELLAR.

Mr. Davenport's opening article, page 529, is a worthy one. He is rather unique in placing cellar bees six or seven hives high. Still, as he keeps the lowest ones well up from the ground, and don't let them topple over, what's the odds? And so the out-door colonies in his vicinity last winter perished, every one—fearful cold, and no good flight for nearly five months. Glad I don't live in Minnesota. My observation to some extent agrees with his, that bees (except when from cold they cannot move around) share in true brotherly heroism their last drops of honey, and all perish at once if it comes to that. But (if I'm right) when a swarm is shut up in a pit some individuals drop, apparently starving, quite awhile before all are overcome. Wonder if these are not outsiders that joined the swarm

while it was in the air. Otherwise, perchance ill ventilation, or worry, or old age, may be the true solution.

A BLIND BEE-KEEPER'S WAY OF FINDING A QUEEN.

That blind bee-keeper's method of finding the queen—coax nearly all the bees away from her with a comb of syrup—may prove worth using by folks not blind, in a few desperate cases of a small and shy black queen, got up in imitation of a squirrel. But a freshly-uncapt comb of new honey from some other hive would draw better than a comb of syrup I think. Of course, the thing would have to be managed so gently that the bees not yet drawn would not fill themselves with their own honey. Page 530.

A "PAT" FOR A BOY SWARM-HIVER.

If J. F. Sautter was a boy in 1897 he can hardly be a Methuselah now. Here's a pat for his back. His method of taking and hiving that swarm—well, the oldest of us couldn't have told him a better one. Page 530.

SELLING EXTRACTED HONEY EARLY.

Sell extracted honey before the many needs of the winter have taxt the buyer's pocket-book. Right you were that time, Mr. Burrell. Page 531.

ANOTHER HINT FOR "MRS. PENNSYLVANIA."

Dr. Miller, that was a good hint of yours to Mrs. Pennsylvania. For another hint (seeing she still longs for the first good super of honey) let her ask that despised vixen of a queen to tell her children to put it up next season. The chances are that if left alone they are far the best honey-storers in the yard—providing they happen not to swarm. Page 535.

CONVENTION PROCEEDINGS

Report of the Central Texas Bee-Keepers' Convention, Held at Milano, July 20-21, 1899.

BY LOUIS SCHOLL, SEC.

The annual convention of the Central Texas Bee-Keepers' Association was held at Milano, Tex., July 20 and 21, 1899. It was called to order by Pres. Aten at 10 a.m., July 10, and Judge J. B. Newton gave the bee-keepers a cordial welcome in behalf of the citizens of Milano, to which Mr. F. L. Aten responded.

There being some time before dinner, the first question in the question-box was taken up.

DO QUEENS LAY IN QUEEN-CELLS?

"Is it a fact that queens lay in queen-cells already started, or do the bees move the eggs?"

Judge Terral said that queens did not lay in queen-cells.

H. H. Hyde had seen evidence that queens did lay in queen-cells, seeing nothing but eggs at times, also cells started and no eggs in them; later eggs were found in them.

G. F. Davidson confirmed Mr. Hyde's views.

F. L. Aten differed from Judge Terral, confirming the views of Messrs. Hyde and Davidson.

E. J. Atchley's experience is that the queen lays the eggs; bees do not move eggs, neither do bees start cells over eggs.

L. Scholl said bees do not start cells over eggs. He tried this when rearing queens. Bees first wait till the egg hatches into a larva, and then construct a cell over it.

A vote was called for on the above question, and the affirmative carried by vote of 4 to 1, the majority in attendance not voting.

"Can a fertile queen be introduced without a cage to a colony with a fertile or unfertile queen, and remain for several days?"

Mr. Hyde recited a case where such was done, and Mr. Atchley confirmed him.

The convention then adjourned till 2 o'clock p.m.

FIRST DAY—AFTERNOON SESSION.

The election of officers for the ensuing year was first taken up, and resulted as follows: E. R. Jones, President;

J. B. Salyer, Vice-President; and Louis Scholl, Secretary and Treasurer. The next meeting will be held at Hutto, Williamson Co., Tex., the first Thursday and Friday before the full moon in July, 1900.

THE HONEY-RESOURCES OF TEXAS.

Mr. Atchley gave a good talk on this subject. He said that north Texas was once a good bee-country, but horse-mint is cut off now, and cotton is the main honey-plant. All Texas is a good bee-country, but the south of Texas is the best in the world. He also said that bee-keeping was undeveloped in the South; that large amounts of honey were going to waste, and that the people had to be educated and taught how to keep bees in better ways. Big bee-keepers of experience could do a lot of good by going around and teaching the people how to keep bees, advise them to keep bees as it is more profitable than other pursuits, there being more money in bee-keeping than in raising cotton. It should be the united efforts of all to push it and teach the producer how to produce honey, by reading bee-literature. The question once was, how to sell a crop of honey, but it is different now. It is how to produce a crop, as the demand for it is always there. Not long ago the demand for honey was very small, but now it has increased from 10 to 15 times as much. He said that he could have sold about 30 carloads this year, as the demand is so great, but was unable to furnish it.

Mr. Davidson said that a discussion on the honey-flora of Texas was not really necessary here, but gave his experience, as he had traveled a good deal over eastern parts of the State, and found bee-keeping in the most undeveloped condition, and the bee-keepers uneducated. He also found fine ranges of basswood in east Texas, but no practical bee-keepers, and honey had to go to waste. The demand for honey with him was so great that he could not supply it.

THE BEST SECTION-HONEY SUPER.

This subject was then handled by O. P. Hyde. He exhibited a section super generally known as the "Ideal." The super was of the dimensions of the standard 10-frame hives, 5 3/4 inches deep. In it were seven plain slats 1 1/2 inches wide, and 3/4 inch thick; on each rested five tall, plain sections, filling up the full inside length of the super. In this he uses the Hyde-Scholl No. 2 separators, which he then described, first telling how he liked the fence separator so well when it first came out, as he knew it was good. But he said that his son, and also Louis Scholl, were not very well satisfied with the fence, and so they made a new separator with slats lengthwise like the fence, but instead of cleats across the separator they made an upright slat with little cleats on the edge of the separator where the sections come in contact. This gave freer communication than the fence; bees could go from section to section straight thru and diagonally across in every direction. On account of the upright slat there is more free communication, and, besides, it caused bees to fill sections solid to the wood. He found it the best separator out, and closed by stating that Mr. Root objected to the Hyde-Scholl separators at first, but wrote several favorable letters lately.

Pres. Jones arose to criticize the above. He liked the super; thought that slatted separators that give free communication straight thru from one row of sections to the other row did not cause better filled sections; believed it was caused by something else, and would like to find out. He thinks full sheets of foundation to come within 1/8 inch of the section would be best. He prefers a free-communication separator, and said that there was nothing nicer than a solid section of honey with the comb sealed all over solid to all sides of the section, and the cappings of the outside row of cells all around a fraction beyond the surface of the comb. This is greatly in favor of the Hyde-Scholl separator, as the upright slot allowed the bees to extend the cappings around the outside edge of the comb just a fraction, which gives it the finest appearance. Mr. Jones said the Hyde-Scholl separator allowed the bees to pass all around the edges of the sections, which is the cause of the better filling. The only objection he mentioned was that the wood-separators were hard to clean of bee-glue. Otherwise he endorses the use of this separator, and suggested improvements on it if necessary.

O. P. Hyde said that he was glad Mr. Jones tried to criticize, and thanked him for making a better speech than he himself. He told Pres. Jones that if he objected to the Hyde-Scholl wood-separator he should use the H.-S. tin ones, and he would not have trouble with bee-glue.

Pres. Jones did not mean the H.-S. wood-separators only, as all wood-separators are hard to clean of bee-glue.

He likes the tin ones, and prefers their use if there is no difference or objection to use tin in supers.

Mr. Atchley spoke most favorably on the H.-S. separators as the best before the bee-keeping world now, and thinks it will be years before any improvement can be made on them. He advises beginners to start with it, and that also everybody use some, and give the young inventors fullest recognition. He also thought one-third more honey could be obtained by their use.

PRODUCING COMB AND EXTRACTED HONEY.

The production of comb and extracted honey in the same hive, to take advantage of short and fast flows, was discussed by H. H. Hyde. He said he had a method with which some, perhaps, were already familiar. For illustration, 50 colonies are put into winter quarters the fall before with plenty of honey in the hive-bodies. During the main honey-flow 30 are run for comb honey, 20 for extracted. See that all have prolific queens, plenty of room and honey, and no queen-excluders. Just before the fast flow he puts the most capt brood in the lower story, takes the upper story to hives run for extracted honey, replacing these with comb-honey supers on the 30 colonies. He prevents swarming by cutting out cells. After the flow he takes off the section supers and replaces with the extracting-supers.

Louis Scholl read a well prepared article on "The Hive I Use," which was requested to be inserted in regular order in this report. It is as follows:

The Hive I Use.

I will first give a description and the measurements of the hive I use, and then the reasons why such a hive was adopted.

For several reasons I prefer the Danzenbaker bottom-board and cover. These are of the 10-frame size. The hive itself is composed of a series of shallow cases, the same as the standard $5\frac{1}{4}$ -inch 10-frame supers. These cases are 16x20 inches outside, and only $5\frac{1}{4}$ inches deep, without tin-rabbets. Each case holds 10 shallow frames, standard Langstroth size, but only $5\frac{1}{4}$ inches deep, and of the Hoffman self-spacing style. These shallow cases are used as brood-chambers as well as for supers when producing extracted honey. The section supers for comb honey are of the same size and depth, and take the tall sections, plain slats, and free-communication separators, generally known as the "Ideal" super arrangement. Two of these shallow-frame supers are used over a brood-chamber, which makes it a depth of $11\frac{1}{2}$ inches.

Twenty frames in both cases have a comb surface nearly equal to 12 Langstroth frames. This provides a large brood-nest, and from experience I find it not too large, not for my locality, at least. My reasons for preferring this hive and shallow frames are as follows: When producing surplus honey in supers above the brood-frames, especially when producing comb honey in section supers, I have had trouble with the bees filling the deep Langstroth frames with the honey that ought to go into the sections during a slow flow, especially along the top edge of the comb above the brood; and after this honey is once sealed, bees are quite loath to store surplus honey above such sealed stores, causing them to loaf and hang all over the hive. Besides, the queen was also crowded out, as the bees filled the cells with honey from which the young bees had just hatched.

Now my question was, how to get that honey out of those frames into the sections above. This, of course, could be done by inverting the brood-chamber, frames and all, but it caused both trouble and labor. Besides, I am not a reversible-frame advocate. It can be accomplished to a great extent, tho, by using a divisible brood-chamber hive, by reversing or exchanging the upper case with the lower one, which puts the honey in the center of the brood-nest, where it is then removed by the bees and carried up above the brood into the section super. By removing this honey the bees also provide more breeding-room for their queen. I think these are some good advantages we have over hives with very deep frames, such as the Dadant-Quinby, and also those Draper "barns," so much spoken of in certain bee-papers.

The "barns" are of the same depth and measurements as my hive, and I cannot see why they compare them to barns, as I do not find them so. Their advocates claim larger colonies of bees and better results for their large combs; object to a division thru the center of the brood-nest, and prefer to have their bees brooding queen's-eggs, larvæ and pupa-bees instead of sticks and empty space.

But why, and for what reasons does Mr. Danzenbaker

have his combs built out solid all around to the frame, and then "gouge" a big hole right thru such combs with a butcher-knife, to provide a passage-way for the bees?

Now I like an opening or passage-way for the bees to go thru, from one comb to another, but I surely prefer those long ones, lined with wooden sticks, to those ugly holes right thru the combs.

Well, as I am a shallow-frame advocate, anyway, and after studying the many advantages which they possess over the deep Langstroth, I was tempted to try some hives with shallow frames of the same depth all thru the hive. I have used, and am still using, supers with shallow frames on all of my Langstroth-frame hives, and there is where I learned of their advantages, especially when running for extracted honey.

As this hive is mostly handled in sections or stories, the full supers are easily removed, by smoking the bees thoroly when raising the cover, forcing them down and out of the full super, when it is then taken off, practically free from bees, and there is not much brushing to be done. Then, too, they are more convenient to handle, as they are not so heavy as the full-depth supers.

The shallow frames are easier to uncap, as one draw of the knife uncaps one whole side of the comb, while it takes longer to uncap the deeper frames; besides, they are awkward to handle, and more danger of combs breaking out.

Besides, I prefer shallow frames for dividing, uniting, transferring, queen-rearing, and most other things in the apiary. There is not much use of handling the frames individually, except in a few instances when looking for the queen or cells, or when looking for larvæ for queen-rearing, and the like. Otherwise the hive is handled by sections, and all that is necessary when examining colonies in early spring, or looking for queen-cells later on, or when examining for honey during the honey season, and such like things, is to tilt the upper case back, and one can get a full view of the brood-nest. If there are queen-cells present, they will generally be found on the bottom edges of the upper frames.

Then, too, if the queen needs more room during the breeding season, one of the shallow cases is added, without the bad result of too much room, as is mostly the case when giving full-depth stories. The same is true when giving weaker colonies more room for honey.

Besides the section supers being of the same depth and size, all are interchangeable, and we are not bothered with hive-bodies and supers of different depths.

The section super for comb honey that I use in connection with this hive, is that known as the "Ideal." It takes 35 one-pound plain sections $3\frac{3}{8} \times 5 \times 1\frac{1}{2}$ inches, which are supported on plain slats, five sections in a row on each slat, taking up the full inside length of the super.

The Hyde-Scholl No. 2 separators are used between the rows of sections and also one each outside next to the wall of the super, when all is wedged up tight by a follower-board and super-springs in the super. This arrangement I prefer, mainly for the free communication offered thruout the whole super. It is the same as the Ideal super just previously described by O. P. Hyde.

My method of manipulation for honey corresponds nearly with the methods applied by H. H. Hyde, and just described by him, or what is known as the Barber plan of producing both comb and extracted honey on the same hive at one and the same time, which plan I myself also conceived several years ago.

I am well aware that there are many who prefer the standard Langstroth frame, but it will be understood that as I produce both comb and extracted honey on the same hive, and at the same time, accounts for my preference for all interchangeable supers.

Some may think that I have made a radical change, while I think I have not, as all these are standard 10-frame shallow supers, and could be used on regular 10-frame hives if found unsatisfactory, which they have not done.

LOUIS SCHOLL.

Mr. Davidson said Mr. Scholl's hive and management for comb and extracted honey is all right, and did not find it necessary to criticise.

Mr. Aday asked Mr. Davidson how he manages to produce comb honey without the use of separators, as he has had bees build their combs crosswise in all six sections when used without separators.

Mr. Davidson answered that he did not use separators and produces fine honey. He is very careful in putting foundation starters in the sections correctly and straight, and exactly in the center. Then he puts the supers on

strong colonies that can fully occupy the whole super at once, and during a big, fast honey-flow.

Pres. Jones says that locality has a great deal to do with it. Then there is a difference in colonies of bees to produce straight combs. During slow flows separators are absolutely necessary, and they are always advantageous in producing straight combs.

Mr. Atchley advises the use of separators, as much honey is ruined by not using them. Beginners need them, and with them separators are necessary. Then he prefers to run colonies for extracted honey if not strong enough to fill the super with bees, and not strong enough to produce comb honey in sections.

The convention then adjourned for supper.

(Continued next week.)



CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.)

Preparing Bees for Cellar Wintering.

I have been in the habit in the autumn of putting on top of my colonies a section-case in which I put a burlap cushion filled with chaff, a Hill's device underneath the cushion. My colonies are put into the cellar in November in this form. Our house is used only in the summer, and has no fire in it thruout the winter, which is long and severe. The bees are carried out from the cellar about April 20. I have had trouble from moldy combs and hives, cushions, etc., gathering dampness. Would you advise me to continue the use of the cushions, or will there be less dampness in the hives without them? I have thought of filling some of the cushions with mineral-wool, and of putting a quantity of unslacked lime in the cellar, altho the cellar itself is a dry one. The dampness comes from the bees themselves, and a low temperature.

I winter the bees without a bottom board, and cover them with a cage of wire-netting to keep mice out. Any criticism of this method will be gladly received.

NEW HAMPSHIRE.

ANSWER.—I doubt my ability to suggest anything better. The cushions can hardly do any harm, and may do good. The lime and mineral-wool plan is at least worth trying. The main trouble seems to be the coldness of the cellar, and you rather imply that no one is present in winter to keep it warmer. Couldn't you make the cellar warmer by sufficient banking? If the house is unoccupied thru the winter, two or three feet of straw or hay on the floor overhead would make the cellar warmer, but such a suggestion would throw a tidy house-keeper into convulsions. An extra quantity of paper—even several thicknesses of newspapers—would answer much the same purpose. The paper could be under or over the carpet.

What Ailed the Queens?

On page 567, "Mich." asks, "What do you think is the trouble?" referring to a queen that would lay drone-eggs. In reply you do not tell him; you say, "It is to be feared the queens are at fault." Now, we know that, Doctor, without writing to you, but how is the faulty queen produced? and what do those queen-breeders do, or not do, to have such?

Last winter was the worst one I ever went thru. In the spring I had lots of dead bees, and so great numbers of empty combs that I protected from the moth by placing them under strong colonies. That gave the colony unbounded room, and I had no swarms, so I sent to a queen-breeder for 15, and after much delay I got them. I introduced them all right; a few went to laying all right, but

seemed afraid of the bees, getting on the outside frame and the most of them were not right. One never layed an egg, finally she was not there, and I gave them a frame with eggs from another colony. Some of the others laid drone-eggs, or worker-eggs in worker-comb, any way; and one all drone-eggs—that one I killed.

Now, I am sure there was something that was not right with that breeder, and he can never sell me another queen, for he is either a man without principle, or he does not know his business. So when I saw the question, "What do you think is the trouble?" and you did not explain, I thought perhaps he is not up to the trick of the trade, but no doubt can find out. So will you please give us the particulars? It is some way connected, I think, with rearing large numbers of queens in an upper story, and not having them strong.

ILLINOIS.

ANSWER.—Referring to the first question on page 567, if you know that the trouble is with the queen, you know more than I do. It is entirely within the range of possibilities that there may be no queen at all in the case, but laying workers. The only thing to militate against such view is the implied statement that some of the sealed brood is worker-brood. But definite length of time is not given, and it is just possible that the sealed worker-brood may be the work of a previous queen, or it may possibly have been given from another colony.

But the probability is that the trouble was with the queen, and coming to the gist of your question I must frankly say that I don't know what the breeder did, or did not, that made the trouble. Indeed, I don't know enough to know whether the breeder was at all at fault. At the same time it must be confest that in the large number who pose as queen-breeders the probability is that a good many, or at least some of them, don't know their business very well, and it is even possible that, as in all other lines of business, there may be one or more that may be properly clast among the unscrupulous. But the most skillful and the most conscientious breeder may send out a queen that he has found to lay all right, and when the purchaser gets it, it may perform as did the one mentioned.

Without knowing all about the matter, I may mention two points in the case. There seems to be a change sometimes made by a journey in the mails. A queen that lays all right in the hands of the breeder, is in some way so changed by her travels that she lays irregularly or scarcely at all for the purchaser, sometimes recovering in a short time, and sometimes not. I once paid a round price for a queen imported from Italy, and when she got among my bees she wouldn't lay an egg in the orthodox way, but persisted in sticking them on the sides of the cells. Fortunately she changed her behavior in a few days, and did excellent work.

As to the other point, a queen is sometimes so maltreated by the bees in a strange colony as to be unfit to do the work she did before. That may be the case when she has not been jolted thru the mails, but is likely to be aggravated in the latter case.

It would take more space than can be here afforded to tell all that must be done, and all that must not be done, to rear good queens. But I'm not sure that you are making a straight guess when you lay the trouble to rearing large numbers of queens in upper stories. No better queens in the world can be reared than can be reared in the upper story of a strong colony with a laying queen below. But you make a center shot when you add, "and not having them strong." To have the royal larvæ fed in anything but a strong colony is neither necessary nor wise. It is possible that they are correct who say that a good nucleus will rear as good queens as a strong colony—at least it is possible that they are right under some circumstances—but it costs only such a trifle more to have the work done by a strong colony, that a breeder is hardly bright, no matter how dishonest he is, if he does not have his queens reared in a strong colony.

If any one else knows in what way a breeder might be at fault in the case, aside from the ordinary rules for rearing good queens, the floor is yielded.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get their subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

GEORGE W. YORK, Editor.



PUBLISHED WEEKLY BY

GEORGE W. YORK & COMPANY,

118 Michigan St., Chicago, Ill.

ONE DOLLAR A YEAR.



SAMPLE COPY FREE.

[Entered at the Post-Office at Chicago as Second-Class Mail Matter.]

United States Bee-Keepers' Association.

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—\$1.00 per Annum.

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GEN'L MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

VOL. 39. SEPTEMBER 28, 1899. NO. 39.



NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The Philadelphia Convention Report is delayed a week on account of copy not arriving in time to continue it in this number. We hope that beginning with next week we may be able to publish it without further break.

Honey Imported into Germany.—The Munchener Bienen-Zeitung reports that in 1896 there was brought into the seaport of Antwerp 1,444,866 pounds of honey; in 1897, 1,562,678 pounds. Of the latter amount United States sent 346,506 pounds.

"Honey Not Advancing, and Why," is the heading of an editorial item in Gleanings in Bee-Culture. Editor Root says prices are not going up as they ought, because commission-houses and honey-buyers are offering little if any better prices than were offered for the big crop of 1897. He says:

As I pointed out in our last issue, when prices are moving upward on everything else there should be a corresponding rise on honey; and if our commission-men can give us a little substantial support we may look for improvement in general prices. In the meantime, bee-keepers should send only to reliable firms. It is the irresponsible cheap Johns—inexperienced, unknown concerns—that move off the honey at any price for the sake of making it move quick.

In all of which he is correct; but it is not so clear that he is correct when he says: "But one, two, or three houses can't advance unless all do." A careful observation of quotations thruout the year hardly warrants the belief that there is a general concert of action among commission-men,

and the fact that one house sometimes *does* advance or lower the price without any corresponding change on the part of others is pretty strong proof that it *can* do it. There seems to be little question that the honey crop of 1899 is unusually short, and there is no reason to satisfy one in believing that there should not be a material advance in price. Indeed, in some quarters, at least, there is already an advance, but there should be a forward movement all along the line.

Bees, Birds and Grapes is an editorial heading in a recent issue of Gleanings in Bee-Culture. Mr. Root remarks thus upon the subject:

Nearly every year about this time the bee-keepers are met with complaints from their neighbors about how the bees are eating their grapes. It has been pretty well established that bees never touch the sound fruit; and until within a year or so it was supposed by all fruit-growers, and even by some bee-keepers, that bees made a small round puncture thru the skin of some soft grapes like the Niagara, and even pierced the more hardy Concord. But two years ago we were successful in finding the real culprit, and that was in the form of a little bird, quick of flight, scarcely if ever to be seen around the vines when any human being was present. This bird, about the size of a sparrow, striped, and called the Cape May warbler (*Dendroica tigrina*), has a long, sharp, needle-like beak. It will alight on a bunch, and about as fast as one can count the grapes will puncture berry after berry. After his birdship has done his mischief he leaves, and then come on innocent bees to finish the work of destruction by sucking the juices of the pulp of the berry, finally leaving it dry and withered up. While the birds are scarcely ever "caught in the act," the bees, ever present during all the hours of daylight, receive all the credit for the mischief.

Grapes broken in handling will be visited by bees independently of any tampering on the part of the feathered tribe; and at such times bees do very often prove to be quite a nuisance; but it may be said, on the other hand, that broken grapes are unsalable anyhow, and therefore this damage is slight if any, and the real mischief or harm done is simply the annoyance caused by the fear of being stung while handling over the bunches in the basket.

On another page will be found an excellent article on this very subject, by Mr. C. P. Dadant. We often wonder if the time will ever come when fruit-growers will cease unjustly accusing the bees of puncturing grapes. But it takes a long time to educate many people when so widely scattered, and also when so disinclined to accept the truth when placed before them. Too many good people are willing to form their opinions simply from the *appearance* of things, not taking the time to investigate carefully and then decide from the facts.

We expect soon to publish some more of the same kind of conclusive evidence that Mr. Dadant gives. It might be a good thing to let your fruit and grape growing neighbors read all that appears in these columns on this subject.

Removing Honey with the Bee-Escape.—In the Progressive Bee-Keeper, G. M. Doolittle gives the following very clear directions for using the bee-escape method of removing honey from the hive, without lifting the supers entirely off:

Many bee-keepers seem to think it necessary to lift the supers entirely from the hive in using bee-escape boards, for ridding the sections of bees. But such a course is very laborious, as well as unnecessary, as there is a much easier way, as well as quicker.

Go to the rear of the hive, having the escape-board, a lighted smoker, a wedge about 8 inches long and 1½ inches thick at the heavy end, and a stout, heavy knife or chisel, the latter being preferable. The chisel I use is what is called a "firmer" chisel, and is one inch wide.

Now with the chisel pry the rear end of the super up a little from the hive, just enough so you can enter the sharp end of the wedge, but not enough so any bee can come out. This gives a crack; open enough so you can send in a

little smoke from the nozzle of your smoker, just enough to drive the bees from the crack you have made.

Next, pry a little harder with the chisel and slip in the wedge till a crack half an inch wide is made. If the frames are of the hanging, loose kind, it is barely possible that some of them may lift up with the super from being glued to it, or from bur-combs. If this happens, you can now catch the chisel between the ends of the frames and the super, and by a little pry cause them to go back on the rabbets where they belong; and if you used a little more smoke just before you did this, no bees will be caught between the end of the frames and the rabbit.

Next, lift a little on the super with one hand and push the wedge up with the other till a crack about an inch wide is made, when you will blow plenty of smoke over the tops of the frames and under the supers, this causing nearly all of the bees to run below or up into the super. Now take hold of the super with one hand, lifting the back end of it till it is at an angle of 45 degrees, when the heavy end of the wedge will cause it to fall to the ground, so you do not need to touch that any more for this operation.

Now pick up the escape-board with the hand at liberty, and put it as far under the super as it will go, immediately lowering the super upon it. Now pick up the chisel and catch the point under the super, when with a little pry, and a pull with the other hand, it is slipped square on the escape-board. Then quickly go to the front end and catch the point of the chisel under the escape-board, and with a little pry and pull, the escape-board and its load are over the hive in the right position, and you have done the whole thing with very little physical exertion, at least not enough but what the weakest of men or an ordinary woman could do easily. The telling of it takes up considerable room on paper, and makes it appear like quite a job, but if any one will practice it on a few hives till he becomes somewhat familiar with it, he will never go back to the old, slow, laborious way of lifting the super off on something, putting on the escape-board and then lifting it back again.

Rosy-Hued Reports of Honey Crops do not receive the entire approval of Somnambulist in the Progressive Bee-Keeper. In his own inimitable way he inveighs against "the wholesale inflation of honey crop reports." One man has a remarkable yield, and that is heralded to China and intermediate places, the bee-papers, as if short of copy, zealously printing and reprinting the story. Then the ambitious supply-dealer parades publicly the great amount of lumber used, hands employed, etc. When the bee-keeper suggests an advance in prices the commission-man confronts him with these rosy reports, and he is dumb. No direct remedy is offered, but a side-thrust given at the inertia of bee-keepers. Please, dear Somnambulist, tell us distinctly just what ought to be done.



REV. E. T. ABBOTT, of Missouri, called at our office on his way home from the Philadelphia convention, last Friday. He took several side trips on both pleasure and business, after the convention closed.

MR. WM. M. WHITNEY, of Kankakee Co., Ill., made an apianian exhibit at the county fair held this month. He received first premiums on both comb and extracted honey. A picture showing himself holding a frame loaded with bees seemed to capture the crowd.

THE CONVENTION PHOTOGRAPH, at Philadelphia, was taken by Mr. W. Z. Hutchinson, of Flint, Mich. It is a very good one, and Mr. H. will mail a copy of it to any one sending him 50 cents. The picture shows about 60 of those that were present at the convention, standing in front of the Franklin Institute building.

MR. L. KREUTZINGER, of this (Cook) county, held his annual "honey harvest," as he calls it, Aug. 19. A number of visitors gathered at the main apiary to enjoy watching taking off the sweets from some 200 colonies of bees, and witnessing the manipulation of hives, bees, wax, and honey extracting and packing, and the work of the honey-bee. The event occurs but once a year, to which Mr. Kreutzinger sent about 400 neatly printed invitations with complimentary tickets of admission to his friends and acquaintances, to which nearly every one responded.

Underneath the rows of shade trees, on benches, the guests, men, women and children, looked from a safe point at the hives being robbed of their sweets, and at the same time sampling the honey offered them in the most liberal quantities, in conformity with a notice posted in the bee-yard, which read thus:

"Visitors are cheerfully invited to partake of as much honey as they desire; those, however, not accustomed to eating honey in large quantities, should partake moderately at first. Every visitor will be served at the table of sweetness from 4 to 7 o'clock, p.m."

About 50 veils were prepared for the occasion for those desiring to look into the hives while supers were being taken off, but many of the visitors had to be without them. Mr. K. exhibited the wonders of the hive to a number of bee-keepers and men of professional experience in the city, and also bee-supplies, some of which he received from Germany a few weeks previous to this honey harvesting event, among them being a papier-mache queen-excluding board; a swarm-bag with self-closer to hive swarms from high trees—a very handy device; queen-nursery, German horse-hair veils, Rietsche uncapping-fork (or comb-rake), isolation-oil for foundation press for deep-cell presses, and other devices of interest.

The hives of bees under the glass in the observatory building, a golden Italian queen-bee in the original mailing-cage, setting up sections and putting in foundation starters, were the principal objects of interest to the visitors.

Nearly all of Chicago's leading newspapers made mention of the event, the Evening Post describing the event as a novelty in this industrial world. It also referred to the history of the honey-bee, the principal objects in view at the apiary, particularly the two-story bee-house containing honey, the packing and fumigating rooms, the upper floor for storage, with the cupola as an observatory. The article closed with this paragraph:

"I askt the master of the apiary how he happened to engage in bee-keeping. He said that in Germany it was the custom, in fact an unwritten law, that country school-masters should in addition to the profession of teaching follow the business of forestry, horticulture, or bee-keeping. His father was a teacher and keeper of bees, and the son naturally loves this occupation. He owns three apiaries, the one visited yielding four tons of comb honey, gathered from the wild flowers of the prairies. The subject of bees and bee-keeping is inexhaustible, and I know of no occupation better calculated to develop and foster the Christian virtues of temperance, patience and industry."

We had the pleasure of calling at the apiary towards evening, just after the crowd had departed. Everything indicated a very sweet time. Mr. Kreutzinger sells much honey in this way, the visitors carrying it home with them in cases holding 12 sections. He also receives many orders by mail soon after his annual honey harvest, from those who were present. It is quite a scheme to get a lot of advertising, tho we don't think we would care to recommend it on so large a scale. Generally, to have a crowd around when removing honey is more of a nuisance than anything else. But, as the colored brother said, "Dipperent men hab dipperent ways."

York's Honey Almanac is a neat little 32-page pamphlet especially gotten up with a view to create a demand for honey among should-be consumers. Aside from the Almanac pages, the forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 40 cents; 50 for 70 cents; 100 for \$1.00; 250 for \$2.25; 500 for \$4.00. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

The Premiums offered on page 621 are well worth working for. Look at them.



The Alfalfa Injured.—W. J. Fulton says that in his part of Kansas there has been too much rain for the alfalfa, a yellow butterfly monopolizes the nectar, and a web-worm webs the buds and bloom into a knot. So the bees have done no good since the first of July, and if the third bloom is no better than the second the honey crop will be almost a failure.—Progressive Bee-Keeper.

How to Wax Rubber Rings.—Dr. Miller said in a Stray Straw that C. Davenport's plan of waxing rubber rings to prevent the leaking of self-sealing cans didn't work in his "locality"—the wax flaked off the rings. Mr. Davenport says in Gleanings in Bee-Culture that the trouble was in having the wax too cold. The wax must be boiling, and the rings just dipt in and instantly withdrawn.

The Best Size of Hive, according to S. P. Culley in the Progressive Bee-Keeper, depends upon three things: Your locality, the sort of man you are, and what you want to do. For a locality subject to drouth no hive will be satisfactory: an 8-frame hive is best where fruit-bloom is plentiful with a fair flow of clover and a fair fall flow; a 10-frame for two very strong flows each season; and a 12-frame for a strong flow from March till October.

A Winter Flow of Honey would seem at first blush, to those whose bees are imprisoned 4 or 5 months, to be a very nice thing. But replies in the Australian Bee Bulletin seem in general to think otherwise, and G. R. Harrison says: "After five years' experience of a country where they often have winter flows, I envy those people who are located where they have a decent winter so that they can shut down the hives and forget all about the apiary for from 4 to 6 months."

Bees and Public Schools.—The Progressive Bee-Keeper copies from the American Bee Journal Anna Sundberg's synopsis of our talk about bees in the public school, expresses the hope that we may find time to address more schools, and asks:

"Would it not be a good idea for all of us to follow Bro. York's plan, and see if we cannot have at least one lecture a year on bees, delivered to the children of our public schools?"

"Extra Fancy" Honey.—A nameless writer in Gleanings in Bee-Culture sounds a note of alarm. "Extra fancy" honey has been quoted by a commission man, and it is feared that such quotation will only have the effect to bring down the general price, the extra fancy taking the place of what was before highest, the price of lower grades falling. Is there any such danger, especially as the quoting of extra fancy was accompanied by a rise in price of the same? The argument is used that not one bee-keeper in 500 will have any extra fancy, and yet why is that one in 500 not entitled to reward for the superiority of his honey?

The Time Between the Prime and Second Swarm is given by Doolittle as nine days. Critic Taylor, in the Bee-Keepers' Review, thinks that doesn't apply to his locality. He kept track of 10 cases, in which one second swarm issued in 5 days; 2 in 7 days; 2 in 8 days; 4 in 9 days; 1 in 10 days. That makes an average of a little more than 8 days; so there is not so very much difference between them. Possibly Mr. Taylor had in mind that the length of time was not the same in all cases, and that view is hardly held by Mr. Doolittle. It might also be added that in some cases the time is considerably more than 10 days.

Western Manipulation is the title of an article in the Progressive Bee-Keeper by F. L. Thompson. That sounds a little novel, for it is perhaps too much the case that instruction for management is given as tho all places were alike. "With two flows," says Mr. Thompson, "the first beginning June 10 to 15, and the last ending somewhere about Aug. 20, with a not entirely barren interval of two or three weeks between them, this being the condition of thousands

of apiaries all over the West proper, it seems high time that we had something else written about management than is applicable to white clover and basswood flows, and that the unqualified talk about 'useless consumers' should be given a rest." Western colonies should continue breeding heavily for some time after June 10, so as to be ready for that August flow. An additional reason for continually large colonies is that the cool nights make the weaker colonies desert the outer parts of the supers, working only in the centers. The habit of Italians, filling up the brood-nest early, Mr. T. thinks a serious fault for the West, and he seems to have a leaning toward Palestines, Carniolans, or Carniolan-Italian hybrids.

How Many Bees for Wintering?—To the question as to how many pounds of bees should be put in a nucleus-box in order to make a full colony to winter over, Mr. Doolittle replies in Gleanings in Bee-Culture somewhat after the following fashion: About 5,000 bees make a pound when the bees are not filled with honey; about 2,500 when the bees are filled. Three weeks before swarming, 20,000 bees make a strong colony, and 40,000 to 50,000 a strong colony for working in sections to the best advantage. A colony good enough to winter successfully must have 12,000 to 15,000 bees, and these, when well filled with honey, will weigh 5 or 6 pounds.

Thick or Thin Winter-Packing.—Most of the Wisconsin bee-keepers cellar their bees, but occasionally one in the southern part or near the lake packs out-doors. R. H. Schmidt wintered 45 colonies thus in the last severe winter with no loss, and attributes his success to the *thinness* of the packing and packing-box. The outside case is made of strips only $\frac{3}{8}$ -inch in thickness, and the packing is three inches. On the other hand, O. O. Poppleton places great stress upon *thick* packing. Mr. Schmidt says the thin packing allows the bees to warm up enough for a flight on warm days; but T. F. Bingham says bees with thick packing "don't have to" fly.—Bee-Keepers' Review.

Advantage of Clipping to the Breeder.—When a customer receives from H. L. Jones an unsatisfactory queen, he replaces it and asks the return of the faulty one. On several occasions he has had returned queens with perfect wings, when the queens he sent out were clipped, the customers not having noticed the difference. The editor of Gleanings in Bee-Culture commends the plan of having queens clipped before being sent out by the breeder. He says that every year they have been obliged to replace queens that he felt morally certain were all right, but probably destroyed by the bees, their places being taken by inferior queens already in the hives. Clipping would be a check on that sort of thing.

Fastening Foundation in the Top-Bar.—Editor Tipper says in the Australian Bee-Bulletin:

"While in Sydney we saw frames with slits on the underside of the top-bar, sufficiently large to place the edge of the foundation in, and a slip of wood $\frac{1}{4}$ -inch square and the length of the underside of the bar, to wedge the same in. It seemed very convenient and trouble-saving."

Doubtless you would think much more convenient the plan in use in this country, Mr. Tipper. Make a saw-kerf wide enough to receive the foundation, then very close beside it another kerf to receive a strip of wood, perhaps 1-16 or $\frac{1}{8}$ -inch in thickness. You will see that in this case the wedging strip does not touch the foundation at all, and is very easily crowded into place.

Selling Honey by the Section.—In Gleanings in Bee-Culture, "American Tramp" says:

Bee-keepers are very foolish to sell their comb honey by the pound. The proper way is to sell it like the retailers, by the section. While in Florida I sold all my comb honey by the section, direct to the retailers. When I first started in, here is about the way I was met by the grocers:

"That's very nice honey; how much do you ask for it?"

"I want 12½ cents e. ch."

"Well, but they don't weigh a pound."

"I did not say they did."

"But honey-sections are supposed to weigh a pound."

"Do *you* sell them by the pound?"

That generally settled it. There was no more said. My sections were $4\frac{1}{4} \times 4\frac{1}{4}$, seven to the foot, and weighed about 13 ounces each. They sold right along side by side at the same price with the six-to-the-foot sections.

Root's Column

THE

*** A B C ***

—OF—

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475 Pages.

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THE A. I. ROOT CO.
MEDINA, OHIO.

GENERAL ITEMS

Questions About Honey-Dew.

I want to ask Mr. C. C. Parsons some questions about honey-dew being a natural secretion. (See page 546.)

Mr. Parsons, you say that the most copious honey-dew you ever saw was in 1897, and it was from the pine, and that it exuded from the leaves. Are you certain that it was not turpentine? I think you would better take your ax, go to those pines and cut notches in them, for you will get turpentine much faster than your bees can gather it on the leaves.

Why is it that honey-dew is never on the under side of the leaves, if it does exude from them?

I hope you will tell us more about it in your next.

A. J. MCBRIDE.

Watauga Co., N. C.

Bees Did Very Well.

Bees have done very well here this season. I have taken 2,500 pounds of honey, and expect to get about 2,000 pounds more, from 30 colonies, spring count.

My bees had the swarming fever badly this year. Some of the first swarms swarmed three times, and some of the old colonies cast three swarms—two swarms two months after casting the first. They have increased from 34 to 105 colonies, and are doing well, with the exception of four that are queenless.

EDWARD KNOLL.

Ontario, Canada, Sept. 6.

Quite a Poor Season.

This has been quite a poor honey season—cool and wet all winter and spring, up to about June 15 or 20. Bees built up very slowly on that account, and most colonies were quite weak when there was any nectar to gather. There was but little swarming; and out of 12 colonies, spring count, I will have about 300 pounds of honey, about half extracted; besides plenty of stores to winter on.

WM. H. BROOKS.

Snobomish Co., Wash., Sept. 13.

But Little Surplus in California.

There will be but little surplus honey produced in this portion of California, and a good many bees have died of starvation. I have lost about 50 percent of my own during the past two dry years, and I judge from conversations with bee-keepers that there will be fully that proportion lost thruout the county.

Last spring I made up my mind to let them get thru as best they could, but later



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may need new rings, new spokes or new tires. These repairs have to be made every little while with wooden wheels. Stop all this expense for all time by buying a set of our

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Alfalfa Clover.....	60c	1.20	2.75	5.00
Crimson Clover.....	55c	.90	2.00	3.50

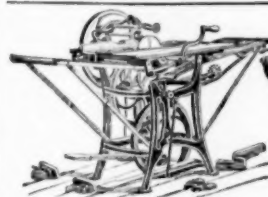
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for ripping, cross-cutting, mitering, rabbeting, grooving, planing, scroll-sawing, boring, edge-moulding, beading, etc.
Full line FOOT AND HAND-POWER MA-

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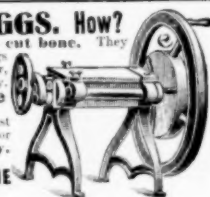
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4 and 5 banded, not a hybrid in the yard. Untested, 75c; Tested, \$1.00.

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as it is getting late in the season, and soon will be time to unite nuclei, so order **QUICK**. All Queens warranted purely mated, and by return mail, safe delivery and satisfaction guaranteed. Price of Queens, 50 cents; six for \$2.75; \$5.00 per dozen. Selected Queens, 75 cents each; six for \$4.00. Selected tested, \$1.50 each. My Queens are prolific and their bees excellent workers.

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on I concluded I could not get along without some bees, and fed up what I had left, and have not lost a colony since. I had but two swarms out of 40 colonies, but most of them are now in good condition, and by dividing up the honey I think they will have stores enough for winter. Since the early forage dried up they have been getting their daily "bread and honey" from the eucalyptus (red gum), and some colonies are still storing a little surplus from that source. F. C. WIGGINS.

San Diego Co., Calif., Sept. 11.

Bees Did Nothing.

Bees did not do anything this season. It rained almost all of last month. The fireweed was in bloom then, and the bees did not have a chance to gather much of it.

H. GALLOWAY.

Skagit Co., Wash. Sept. 13.

"Just Simply Stop Breathing."

On page 294 is a quotation with the above title, given by A. P. Raymond. Some of the readers will perhaps be surprised to know that the very same thing, word for word, was published in Gleanings in Bee-Culture in the number for August 15, 1888. To the quotation Prof. Cook added this:

FRIEND ROOT:—I heard years ago of the absurdity that holding one's breath would exempt him from stings. I thought at once it was nonsense, but, nevertheless, I put it to the test. It was one of the most conclusive experiments I ever tried. I think the bee appreciated the joke, for I got one of the most painful stings I ever had.—A. J. COOK.

ADRIAN GETAZ.

Knox Co. Tenn.

Bees and Honey in Utah.

As far as Utah is concerned, this is certainly an off year, not only as regards the bee industry but in many other respects. In Salt Lake and several other counties, while the winter loss was not very severe (possibly about 10 percent), the month of May was a terror—it was wet and cold nearly the entire month. Considerable fruit was destroyed, and while possibly not over 25 percent of the number of colonies died, if we take into consideration the weak condition of those that were left, a few of which dwindled and died off in June and

Two Hundred

One-Hundred-Dollar Breeding-Queens, all as good as I sent the A. L. Root Co., ready Sept. 20. One Queen, \$1.00; or three Queens, \$2.75.

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The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at \$1.00; or for \$1.10 we will mail the Bee Journal one year and the Clipping Device. Address,
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We are now in shape to buy Extracted Honey, either in large or small lots. Parties having any to offer will do well to sell to us, as Cincinnati is a great market for Extracted Honey. Submit a small sample, stating quantity, style of package, and price expected. Prompt remittances. References:

Western German Bank—The Brighton German Bank Co. (both of Cincinnati, O.)

Please mention the Bee Journal.

FREE FOR A MONTH

If you are interested in Sheep in any way you cannot afford to be without the best Sheep Paper published in the United States.

Wool Markets and Sheep

has a hobby which is the sheep-breeder and his industry, first, foremost and all the time. Are you interested? Write to-day.

WOOL MARKETS AND SHEEP, CHICAGO, ILL.

July, it will make the actual loss of bees considerably over 50 percent. Thru the causes named, the bees of a number of our bee-keepers were slow in building up, and the outlook was anything but flattering for them.

The honey-flow, as a rule, appeared to be all right, but this was of little benefit to the bee-keeper whose bees were not in a condition to gather it; still, with all our troubles, some of the bee-keepers who possibly were more favorably located and who succeeded in building up their bees, said they were getting as much, and in some instances more, honey per colony than they did last year. Six or seven places where I had bees the honey-flow was pretty good, but if we get many more May months like the one we had this year, this county at least will not rank as a bee-keepers' paradise.
E. S. LOVESY.

Salt Lake Co., Utah.

Bees in Good Condition.

My bees are now in good condition, and I received in all about 1,500 pounds of honey. I have increased from 25 colonies to 43.

H. L. F. WITTE.

Hennepin Co., Minn., Sept. 18.

A Young Bee-Keepers' Experience.

I contracted the bee-fever in 1897. In April I got two colonies in Hubbard hives, but I did not know how to manage bees except in the old way of letting them swarm and do as they pleased, and I had the bee-fever so badly that I could not rest. I had no books, no papers, no person to tell me anything more about the pursuit than I knew myself. I finally got A B C of Bee-Culture and some modern hives. When the hives arrived I commenced to put them together, and study the book, but the fever did not get any better; in fact it got worse. One of my colonies cast two swarms, and then I transferred the mother colony into one of my new hives, and the other colony cast one swarm. Then I transferred it; this filled my five new hives.

The first swarm that issued stored surplus to the amount of 45 pounds. I packed them on the summer stands for winter, and they pulled thru, but the spring of 1898 they died so that they were very weak in numbers, so the first of May I commenced to feed, and I soon had them strong again. I kept them from swarming by dividing. I increased to 10 colonies, and in September I built a house-apery 12 feet square, and moved my 10 colonies into it in November. They wintered well in it.

This year (1899) I increased my bees to 17 colonies, and they are all in fine condition; they have stored a good deal of honey. There is a pretty good honey-flow here at present from fall flowers and buckwheat.

I find one trouble with my house-apery, and that is, the young queens seem to disappear. I lost three queens out of one lot of seven. I think they must get into the

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And also located on the Yazoo & Mississippi Valley R. R. in the famous

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Write for Pamphlets and Maps.

E. P. SKENE, Land Commissioner,

Ill. Cent. R. R. Co., Park Row, Room 413,
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BEE-KEEPERS !

Let me send you my 64-

page CATALOG for 1899.

J. M. Jenkins, Wetumpka, Ala.

Please mention Bee Journal when writing.

PATENT WIRED COMB FOUNDATION

Has no Sag in Brood-Frames.

Thin Flat-Bottom Foundation

Has no Fishbone in the Surplus

Honey.

Being the cleanest is usually workt the quickest of any foundation made.

J. A. VAN DEUSEN,

Sole Manufacturer,

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—AND—

Journal of Agriculture,

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A wide-awake, practical Western paper for wide-awake, practical Western farmers, stock-raisers, poultry people and fruit-growers, to learn the science of breeding, feeding and management. Special departments for horses, cattle, hogs, sheep, poultry and dairy. No farmer can afford to do without it.

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WE want to add a lot of NEW subscribers to our list during the next two months, hence **TRIAL OFFER.** It is 13 copies of the old American Bee Journal for 20 cents—about half per copy. If **THREE** new trial trippers are sent together, they will be received. We would be pleased to have our friendly readers show this trial offer to their bee-keeping acquaintances, and send us a few new subscribers. You will do both them and us a great favor.

The best part of the Philadelphia Convention Report will appear in those 13 numbers.

GEORGE W. YORK & CO., 118 Michigan St.

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G. B. LEWIS COMPANY,

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wrong colonies on returning from their wedding flight. Will Dr. Miller, or Mr. Doolittle, tell me how to remedy this matter? I have two-inch auger-holes thru the building two feet apart, and I keep the bees only on the east, south and west sides of the building. On the north side I have a door and window. This building will hold 32 colonies, and I want to increase next year to that number, so I want to know how to prevent this loss of young queens.

JAMES N. ALEXANDER,

Clearfield Co., Pa., Sept. 4.



In the multitude of counsellors there is safety.—Prov. 11-14.

Increase by Dividing or Swarming.

Query 165.—Do you prefer increase by division, or by natural swarming? Why?—ARIZ.

Dr. J. P. H. Brown—Natural swarming. G. M. Doolittle—Neither. My object now is no increase.

Cbas. Dadant & Son—By division, because we select our breeders.

Prof. A. J. Cook—Natural swarming, as most convenient and profitable.

R. C. Aikin—By division. It is more convenient; I do it when I am ready.

Mrs. L. Harrison—Natural swarming. Because I'm not wiser than the Creator.

W. G. Larrabee—Natural swarming. More ambitious, and nearer Nature's laws.

E. France—We increase by division, then we don't have to keep a hand in our out-yards.

Mrs. A. J. Barber—By division. Because increase can be made so much faster by division.

O. O. Poppleton—I don't like either way. I prefer what is known as the "nucleus method."

S. T. Pettit—By natural swarming. Because I would get more honey in that way, and better queens.

J. M. Hambaugh—Could I always be on hand, natural swarming. They seem to work with more vim.

P. H. Elwood—By division. We couldn't manage them in several yards if we permitted them to swarm.

C. Davenport—I largely practice dividing. It is less work, and gives one better control or command of a yard.

Eugene Secor—My study is to prevent increase. If more bees are wanted, either method can be made successful.

J. A. Green—By natural swarming, because I generally want as little increase as possible, and keep it down all I can.

D. W. Heise—When I desire increase, I prefer it by natural swarming. Divisions have not been so satisfactory to me.

C. H. Dibbern—Natural swarming. If they don't swarm I do without, as I always get more swarms than I want, anyway.

Dr. C. C. Miller—I would rather never see a swarm. Too much trouble, and swarming interferes too much with the honey crop.

Mrs. J. M. Null—It depends upon the season. During a good honey-yield I prefer natural swarming, giving four Langstroth frames, with sections from the parent colony.

Rev. M. Mahin—If I want much increase, and have empty combs or foundation, I prefer division. If I want increase reduced to a minimum, and want honey, natural swarming. The "why" is very plain. I can make more colonies, and have them in

good condition, by dividing. I will get more honey and less increase by natural swarming.

J. E. Pond—I prefer dividing. The matter will depend largely upon circumstances and conditions. It seems to me to be an individual question, and one that each must decide for himself.

A. F. Brown—Natural swarming for best results in a crop of surplus honey, especially comb honey. If an attendant cannot be given the bees during the swarming season, I would prefer dividing.

Dr. A. B. Mason—By natural swarming, because it is less trouble and secures better results. If you don't want increase and don't know how to prevent swarming, follow the Heddon plan in hiving swarms.

J. A. Stone—Division, because you can divide more evenly than the bees are apt to do it, and while dividing you have the opportunity to destroy any surplus of queen-cells, and detect any wrong that may exist.

Emerson T. Abbott—By natural swarming. If bees are properly managed they will gather more honey, if permitted to swarm in the natural way. If bees, and not honey, was what I desired, I would divide them.

E. Whitcomb—If I desired to attend church on Sunday I would divide, otherwise I consider the natural swarming best. God arranged that for the bees, and when we attempt to thwart Nature a cog is pretty sure to slip somewhere.

R. L. Taylor—By swarming, because I want colonies as strong as possible for the production of comb honey. If I divided I might divide some that would not swarm at all, and dividing would not prevent others from swarming, after all.

Adrian Getaz—By division, for two reasons. 1st, because I can increase just what I want, and when I want. 2nd, because natural swarming occurs at a time of the year when all the bees are needed to gather surplus, instead of starting new colonies.

G. W. Demaree—If I wanted to increase my apiary rapidly, I would practice both the natural and artificial methods of increase. Why? Because then I would not be limited by any iron-jacket rule, and if Nature was tardy I would go forward and accomplish my purpose.

E. S. Lovesey—By division, because with proper management all colonies can be kept strong, which cannot always be done here by the swarming method. The swarm, as a rule, is all right, but the old colony is often a failure. But division must not be overdone; if it is worked just right, and if you keep your queens laying, and the bees working, if there is any honey-flow they will bring it in.

For Sale! 90 COLONIES OF BEES—mostly in chaff-packet hives all in good condition. Good willow-herb district, range unlimited. Address MAPLE GROVE APIARY, Crossing, Manistee Co., Mich. 39A11

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We Offer: To send **The Rural** 13 weeks on trial (price 25c) and a copy of the above work (price 25c) to any address for only **25c.** Coin or Stamps

Club Offer: For \$1 we will send 5 copies of each. For \$1.50 we will send 10 copies and a book, and a year's subscription to the club raiser free.

Make up a club of 10 and thus assist in stamping out or preventing the swine plague from getting a foot hold in your neighborhood. Address **THE NATIONAL RURAL**, Chicago, Ill. 39A3t

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Convention Notices.

Utah.—The Utah Bee-Keepers' Association will hold their semi-annual convention in the City and County Building, Salt Lake City, Oct. 5, at 10 o'clock a.m. A full program in the interest of the industry will be presented. All are invited. Some prominent bee-keepers are expected to be present, and one or more meetings may be held at the State Fair.

J. B. FAGO, Secretary.

Illinois.—The annual meeting of the Northern Illinois Bee-Keepers' Association will be held at the Court House in Rockford, Ill., on Tuesday and Wednesday, Oct. 17 and 18, 1899. All are cordially invited. B. KENNEDY, Sec. New Milford, Ill.

Dairy Farm For Sale

consisting of 235 acres, as good a farm as there is in Lake Co., Ill., located only 26 miles north of the Chicago court-house, on the old Chicago and Milwaukee stage-road (or Milwaukee Ave. now), and 1½ miles from Prairie View on the Wisconsin Central railroad. The beautiful Desplaines river runs thru the pasture, besides the timber land. Also 19 acres of good timber one mile northeast of Half Day, making 254 acres in all.

The farm is not only a splendid one for dairying, but is also a good location for bees. There is white clover, sweet clover, basswood, etc. The editor of the American Bee Journal has been on the farm and will confirm every statement concerning its value.

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FOR SALE!

A small place of 11 acres of land, a good house and barn, with all kinds of fruit, 50 colonies of bees in as good a honey locality as there is in Michigan, the 1899 crop of honey being 1,600 pounds of extracted from 25 colonies, and increased to 50 colonies. Enquire of

A. O. SUTTON, Easton, Shiawassee Co., Mich. 39A2t Please mention the Bee Journal.

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(SEMI-MONTHLY).

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HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Sept. 20.—Fancy white comb honey brings 15c; No. 1, 13@14c; ambers, 10@12c; dark, 9@10c. Extracted, white, in cans, 7½@8c; in barrels, 7@7½c; amber, 6½@7c. Beeswax, 20c.

The receipts are increasing and sales are becoming more frequent. Shipments are coming to hand in good order, and when properly prepared will do so until we get zero weather, after which it is liable to crack, and break away from the frames. R. A. BURNETT & CO.

KANSAS CITY, Sept. 14.—The supply of comb honey is very light. Scarcely any extracted on the market. We quote fancy 1-pound comb, 14@15c; No. 1, 13@14c; No. 1 amber, 12@13c. Extracted, white, 7c; amber, 5@6c; dark, 4@5c. Beeswax, 22@25c. C. C. CLEMONS & CO.

NEW YORK, Sept. 20.—Fancy white, 15c; No. 1, white, 13@14c; fancy amber, 11@12c; No. 1, amber, 10@11c; buckwheat, 9@10c. Beeswax dull at 25@26c.

Demand good for all kinds of comb honey, and ready sale. Extracted in good demand also, excepting buckwheat, at unchanged prices.

HILDRETH & SEGELKEN.

SAN FRANCISCO, Aug. 25.—White comb, 11½@12½c; amber, 8@10c. Extracted, white, 7½@7¾c; light amber, 6½@7c. Beeswax, 26@27c.

The market remains unfavorable to the buying interest, and is likely to so continue through the season, with supplies of very moderate volume, not only here, but also in the interior.

CLEVELAND, Aug. 18.—New honey scarce and in good demand. Fancy white, 15c; No. 1 white, 13@14c; fancy amber, 12c; No. 1 amber, 10@11c. A. B. WILLIAMS & CO.

BOSTON, Sept. 21.—Fancy white comb, 1-pound sections, 16c; A No. 1, 14@15c; No. 1, 13@13½c; No. 2, 11@12c. White amber extracted, 8@8½c. Beeswax, 27c.

New comb honey is coming in very slowly, showing a general shortage all over the country.

BLAKE, SCOTT & LEE.

BUFFALO, Sept. 22.—Receipts of honey very light indeed. Fancy 1-pound comb, 14@14½c; fair to good, 12@13c; poor, less.

BATTERSON & CO.

OMAHA, Aug. 16.—Still very little doing and receipts so light that a market price has really not been established. Little lots of choice new comb are still going at 14@15c, but a good many dealers will not touch it at these prices, and in order to place larger quantities at this time a considerably lower figure would have to be made. In the course of another month, when the weather is cooler and the taste for fruits more fully satisfied, the demand for honey will be more general and a more reliable market can be quoted. Extracted is slow sale at 7@7½c.

PEYCKE BROS.

DETROIT, Sept. 11.—Honey-producers accustomed to selling in Detroit have hard work to satisfy local trade. Very little honey in market. White comb, 14@15c; dark, 12@13c. White extracted, 7½@8c. No dark wanted. Beeswax, 23@25c. M. H. HUNT & SON.

WANTED.—Comb and extracted honey; state price, kind, and quantity.

R. A. BURNETT & CO.,

33A13t 163 So. Water St., Chicago, Ill.

Wanted! Your HONEY

We will buy it, no matter where you are. Address, giving description and price, THOS. C. STANLEY & SON, Fairfield, Ill.

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BEE-HIVES, SECTIONS, SHIPPING-CASES—everything used by bee-keepers. Orders filled promptly. Send for Catalog. **Minnesota Beekeepers' Supply Mfg. Co.**, Nicollet Island, Minneapolis, Minn. 18A1f

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The New Champion WINTER-CASE...

which does away with all unneces-
sary work, and in which the bees
will not die in the coldest winter.
Send for special prices on quantity
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BEES **QUEENS**
Smokers, Sections,
Comb Foundation
And all Apian Supplies
cheap. Send for
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M. H. HUNT & SON,

SELL ROOT'S GOODS AT ROOT'S PRICES.
Shipping-Cases and Danz. Cartons are what
you need to display and ship your honey in.
Send for Catalog. BELL BRANCH, MICH.

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Wood Binder

will hold one year's numbers
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accompany each Binder. The
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ence in book form.

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HONEY.

Buy now before advance in prices.

60-lb. cans Pure Alfalfa Clover ... 9½c
Half barrels (300 lbs.) Basswood-
Clover 9c
Full barrels (600 lbs.) Pure Amber
Honey 7¼c

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22nd Year Dadant's Foundation. 22nd Year

Why does it sell so well?

Because it has always given better satis-
faction than any other.
Because in 22 years there have not been any
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PURITY, FIRMNESS, No SAGGING, No
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Send name for our Catalog, Samples of Foundation and Veil Material. We sell
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Portland Seed Co. Portland, Oregon.	J. L. Gray St. Cloud, Minn.
E. T. Abbott St. Joseph, Mo.	Pierce Seed and Produce Co. Pueblo, Colo.
L. C. Woodman Grand Rapids, Mich.	F. Foulger & Sons Ogden, Utah.
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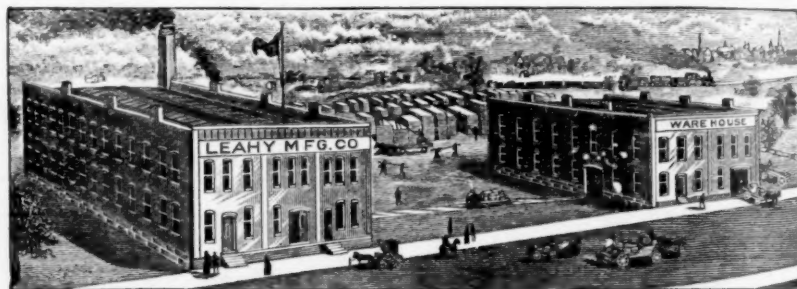
Langstroth on the Honey-Bee, Revised. The Classic in Bee-Culture—
Price, \$1.25, by mail.

Beeswax Wanted at all times.

CHAS. DADANT & SON,

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1-pound square, \$4.70 per gross, with corks ; 5 gross, \$4.50 per gross. Labels,
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THE BEST, with silk face, 35 cents each ; 5 for \$1.50, postpaid. If not sat-
isfactory, you can return.

BASSWOOD EXTRACTED HONEY, in cans, 8¼c pound. Sample 5 cents.

Catalog free.

I. J. STRINGHAM,

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This is a good time
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wax. We are paying
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CASH—upon its re-
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wax not taken at any price. Address as follows, very plainly,

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118 Michigan Street, CHICAGO, ILL.